

Appln. No.: 10/713,450  
Amdt. dated April 19, 2006

**Amendments to the Claims:**

Please cancel claims 24, 26-28 and 32 as shown in the listing of claims that follows. This listing of claims will replace all prior versions and listings of claims in the application.

**Claims 1-24 (cancelled)**

25. (previously presented) An apparatus for receiving data on a fiber channel, the apparatus comprising:

an input that accepts an interleaved signal comprising a plurality of discrete successive values;

a plurality of sample and hold circuits that accept the interleaved signal and extract a sample comprising a discrete value;

a plurality of analog to digital converters that convert the discrete values from the plurality of sample and hold circuits to a plurality of digital values;

a 32-inverse Fourier transform circuit that accepts said plurality of values from the plurality of analog to digital converters and converts said values into symbols (S) and complex conjugates of the symbols (S\*);

a plurality of trellis decoders that accept said symbols (S) and said complex conjugates of the symbols (S\*) and produced an uncoded output; and

an interface which accepts the outputs of said plurality of trellis decoders and combines them into a digital signal.

**Claims 26-28 (cancelled)**

29. (previously presented) An apparatus as in claim 25 wherein the interface comprises a Gigabit Media Independent Interface (GMII).

30. (previously presented) An apparatus as in claim 25 wherein the apparatus is integrated within a single integrated circuit.

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31. (previously presented) An apparatus as in claim 30 wherein the single integrated circuit is a complementary Metal Oxide Semiconductor (CMOS) integrated circuit.

32. (cancelled)

33. (previously presented) A method of processing data received from a fiber channel, the method comprising:  
receiving an interleaved signal comprising a plurality of discrete successive values;  
extracting a plurality of samples from the interleaved signal, each sample comprising a discrete value;  
converting the discrete values to a plurality of digital values;  
performing an inverse Fourier transformation on the plurality of digital values to convert said values into symbols (S) and complex conjugates of the symbols (S\*);  
trellis decoding the symbols (S) and the complex conjugates of the symbols (S\*) to produce a plurality of uncoded outputs; and  
combining the plurality of uncoded outputs into a digital signal.